

IN THE CLAIMS:

1-22. (Cancelled)

23. (Currently amended) A method of controlling a transport temperature control unit to maintain a first conditioned space within a transport at a temperature setpoint, the temperature control unit having cooling and heating cycles for cooling and heating the conditioned space, the temperature control unit including a first programmable temperature range, the transport further comprising a second conditioned space and the unit further comprising a second programmable temperature range, the method comprising:

programming into the unit a first pre-programmed control mode for maintaining the temperature setpoint;

configuring the unit such that a second control mode for maintaining the temperature setpoint is programmable into the unit by an end user;

selecting numerical temperature values for the first programmable temperature range, the selection of numerical values being made by the end user;

selecting the first pre-programmed control mode for operation of the first programmable temperature range or to program the second control mode into the unit for operation of the first programmable temperature range, the selection of the first pre-programmed or to program the second control mode being made by the end user; and

programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user;

utilizing one of the first pre-programmed control mode and the second control mode to control the operation of the unit in the second conditioned space with the second programmable temperature range; and

selecting a first priority for the first programmable temperature range and a second priority for the second programmable temperature range by the end user.

24. (Currently amended) The method as claimed in claim 23, wherein the first programmable temperature range is operable to control the operation of the unit in the first conditioned space by being selectively operable to utilize one of the first pre-programmed control mode and the second control mode.

25. (Original) The method as claimed in claim 23, wherein the numerical temperature values include a minimum temperature value and a maximum temperature value.

26. (Cancelled)

27. (Currently amended) The method as claimed in claim 23, further including the step of programming a unit control mode for the first programmable temperature range.

28. (Currently amended) The method as claimed in claim 27, wherein the step of programming a unit control mode for the first programmable temperature range further includes selecting one of a cycle mode, a continuous mode and a cycle/continuous select mode.

29. (Previously presented) The method as claimed in claim 27, wherein the unit control mode is one of a cycle mode, continuous mode and a cycle/continuous select mode.

30. (Currently amended) The method as claimed in claim 23, wherein the step of programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user further includes the step of selectively programming a fuel saver timer operable to decrease fuel consumption of the unit.

31. (Currently amended) The method as claimed in claim 23, wherein the step of programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user further includes the step of programming a high speed cool to low speed cool switch point at which point the unit switches between high speed cool and low speed cool in the first conditioned space.

32. (Currently amended) The method as claimed in claim 23, wherein the step of programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user further includes the step of

programming a restart temperature at which temperature the first conditioned space restarts from a null condition.

33. (Currently amended) The method as claimed in claim 23, wherein the step of programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user further includes the step of programming fan operation of the unit in the first conditioned space.

34. (Currently amended) The method as claimed in claim 23, wherein the step of programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user further includes the step of programming a low speed heat to low speed cool switch point at which point the unit switches between low speed heat and low speed cool in the first conditioned space.

35. (Currently amended) The method as claimed in claim 23, wherein the step of programming the second control mode into the first programmable temperature range by the end user when the second control mode is desired by the end user further includes the step of programming door switch options by the end user.

36. (Cancelled)

37. (Currently amended) The method as claimed ~~in claim 36~~ in claim 23, wherein the first programmable temperature range and the second programmable temperature range are both operable by the first pre-programmed control mode.

38. (Currently amended) The method as claimed ~~in claim 36~~ in claim 23, wherein the first programmable temperature range and the second programmable temperature range are both operable by the second control mode.

39. (Currently amended) The method as claimed ~~in claim 36~~ in claim 23, further including the step of selecting a first unit control mode for the first programmable temperature range and a second unit control mode for the second programmable temperature range.

40. (Previously presented) The method as claimed in claim 39, wherein the first and second unit control modes are one of a cycle mode, a continuous mode and a cycle/continuous select mode.

41. (Cancelled)

42. (Currently amended) The method as claimed ~~in claim 41~~ in claim 40, wherein the first priority and the second priority are different priorities.

43. (Currently amended) The method as claimed in claim 42, further including the step of determining which of the first priority and the second ~~priority are~~ priority is a higher priority.

44. (Currently amended) The method as claimed in claim 43, further including the step of operating the temperature control unit in the unit control mode corresponding to which of the first priority and the second ~~priority have~~ priority has the higher priority.

45. (Currently amended) A transport temperature control unit having cooling and heating cycles for cooling and heating a conditioned space within a transport to maintain the conditioned space at a temperature setpoint, the unit comprising:

a first pre-programmed control mode for maintaining the temperature setpoint being programmable into the unit; and

a second control mode for maintaining the temperature setpoint being programmable into the unit by an end user, the end user selectively determining whether the first pre-programmed control mode is selectable to control operation of the unit within the conditioned space or the second control mode is programmable into the unit to control operation of the unit within the conditioned space, wherein the second control mode is programmable into the unit by the end user when the second control mode is desired by the end user; and

a programmable temperature range, the programmable temperature range being operable to control the operation of the unit in the conditioned space by being selectively operable to utilize one of the first pre-programmed control mode and the second control mode, wherein the unit control mode is one of a cycle mode, continuous mode and a cycle/continuous select mode.

46. (Original) The transport temperature control unit as claimed in claim 45, further comprising a selectively determinable fuel saver timer operable to decrease fuel consumption of the unit, the fuel saver timer being selectively determinable by the end user.

47. (Original) The transport temperature control unit as claimed in claim 45, further comprising a high speed cool to low speed cool switch point, the high speed cool to low speed cool switch point determining at which temperature the unit switches between high speed cool and low speed cool in the conditioned space, the high speed cool to low speed cool switch point being selectively determinable by the end user.

48. (Original) The transport temperature control unit as claimed in claim 45, further comprising a restart temperature, the restart temperature determining the temperature at which the conditioned space restarts from a null condition, the restart temperature being selectively determinable by the end user.

49. (Original) The transport temperature control unit as claimed in claim 45, further comprising fans, operation of the fans being selectively determinable by the end user.

50. (Original) The transport temperature control unit as claimed in claim 45, further comprising a low speed heat to low speed cool switch point, the low speed heat to low speed cool switch point determining at which temperature the unit switches between low speed heat and low speed cool in the conditioned space, the low speed heat to low speed cool switch point being selectively determinable by the end user.

51. (Original) The transport temperature control unit as claimed in claim 45, further comprising door switch options, the door switch options being selectively determinable by the end user.

52. (Cancelled)

53. (Previously presented) The transport temperature control unit as claimed in claim 45, wherein the programmable temperature range further includes numerical temperature values.

54. (Original) The transport temperature control unit as claimed in claim 53, wherein the numerical temperature values include a minimum temperature value and a maximum temperature value.

55. (Previously presented) The transport temperature control unit as in claim 45, wherein the programmable temperature range further includes a priority, the priority being selectively determinable by the end user.

56. (Previously presented) The transport temperature control unit as claimed in claim 45, further comprising a unit control mode for the programmable temperature range, the unit control mode being selectively determinable by the end user.

57. (Cancelled)

58. (Previously presented) The transport temperature control unit as claimed in claim 45, wherein the conditioned space is a first conditioned space and the programmable temperature range is a first programmable temperature range, the transport further comprising a second conditioned space and the unit further comprising a second programmable temperature range, the second programmable temperature range being operable to control the operation of the unit in the second conditioned space by being selectively operable to utilize one of the first pre-programmed control mode and the second control mode.

59. (Original) The method as claimed in claim 58, wherein the first programmable temperature range and the second programmable temperature range are both operable by the first pre-programmed control mode.

60. (Original) The method as claimed in claim 58, wherein the first programmable temperature range and the second programmable temperature range are both operable by the second control mode.

61. (New) A method of controlling a transport temperature control unit to maintain a first conditioned space within a transport at a temperature setpoint, the temperature control unit having cooling and heating cycles for cooling and heating the conditioned space, the temperature control unit including a first programmable temperature range, the transport further comprising a second conditioned space and the unit further comprising a second programmable temperature range, the method comprising:

programming into the unit a first pre-programmed control mode for maintaining the temperature setpoint;

configuring the unit such that a second control mode for maintaining the temperature setpoint is programmable into the unit by an end user;

selecting numerical temperature values for the programmable temperature range, the selection of numerical values being made by the end user;

selecting the first pre-programmed control mode for operation of the programmable temperature range or to program the second control mode into the unit for operation of the programmable temperature range, the selection of the first pre-programmed or to program the second control mode being made by the end user;

programming the second control mode into the programmable temperature range by the end user when the second control mode is desired by the end user;

utilizing one of the first pre-programmed control mode and the second control mode to control the operation of the unit in the second conditioned space with the second programmable temperature range;

selecting a first unit control mode for the first programmable temperature range and a second unit control mode for the second programmable temperature range, wherein the first and second unit control modes are one of a cycle mode, a continuous mode and a cycle/continuous select mode;

selecting a first priority for the first programmable temperature range and a second priority for the second programmable temperature range by the end user, wherein the first priority and the second priority are different priorities;

determining which of the first priority and the second priority is a higher priority;  
and



operating the temperature control unit in the unit control mode corresponding to which of the first priority and the second priority has the higher priority.